

Amendments to the Drawings

The attached two sheets of drawings include changes to both Figures 1 and 2. These two sheets, which include Figures 1-3, replace the original drawing sheets for Figures 1-3. In Figure 1, reference numeral “362” has been changed to “361.” In Figure 2, reference numeral “64” has been changed to “46.”

Attachments: Replacement Sheets
Annotated Sheets Showing Changes

REMARKS

Drawings

As indicated above, Applicant has included two replacement sheets (and two annotated sheets showing changes) for Figures 1-3. In Figure 1, reference numeral "362" has been changed to "361." In Figure 2, reference numeral "64" has been changed to "46." No new matter has been added.

Status of claims

Claims 1-10, 12-36, and 38-39 were pending in this application. In this response, no claims have been added or cancelled.

Accordingly, claims 1-10, 12-36, and 38-39 remain pending in this application.

In the Office Action, the following rejections were made:

Claims 1-10 and 33-35 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith (US Patent No. 6394796) in view of Eich (US Patent No. 4712014) and Feroce (E.P. Pat No. 0851193) and Koren (US Patent No. 6567162);

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, and Koren as applied to claims 1-10 and 33-35 above, and further in view of Bramm (US 4763032);

Claims 13-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, and Koren as applied to claims 1-10 and 33-35 above, and in further light of Powell (US Patent No. 4958306);

Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, and Koren as applied to claims 1-10 and 33-35 above, and in further light of Bauer (US Patent No. 5871236);

Claims 16-21, 24, 27-30, 32, 36, and 38-39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, and Koren as applied to claims 1-10 and 33-35 above, and further in view of (Bubley US Patent No. 4646446) and Coleman (US Patent No. 3790801);

Claim 31 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, and Koren as applied to claims 1-10 and 33-35 above, and further in view of Uesaki (US Patent No. 4928040);

Claims 22 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, Koren, Bubley, and Coleman, as applied to claims 16-21,

24, 27-30, 32, 36, and 38-39 above, and further in light of Terashi (US Patent No. 5532043) and Davenport (US Patent No. 5101325); and,

Claims 25 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Feroce, Eich, Koren, Bubley, and Coleman, as applied to claims 16-21, 24, 27-30, 32, 36, and 38-39 above, and further in view of Folsom (US Patent No. 4111753).

Applicant respectfully traverses the above rejections and requests reconsideration of same in light of the following arguments.

Argument

First, Applicant submits that combining *Koren* with *Smith* and *Eich* and *Feroce* does not result in the claimed invention.

Koren discloses an inspection apparatus for quality control and rejection of defective parts, particularly in the production line of an automotive assembly plant or an automotive machining plant (*see*, column 1, lines 20 to 27; column 4, lines 16 to 21). The apparatus comprises a plurality of detectors 114 that are mounted on one or more stationary supports 120 (*see* column 4, lines 57 to 67), which may form a kind of a bridge under which the part to be inspected is conveyed with the help of a conveyor line 102. The detectors (sensors 116 and cameras 118) communicate with a programmable logic controller (PLC 184) “which controls the operation of manufacturing/machining equipment for the parts 106” (*see*, column 7, lines 45 to 51).

Koren further states: “The computer system 148 may also include a feedback module 160 that communicates with manufacturing or machining equipment such as a numerical controller (NC) 162 to provide input to such equipment when defective parts exceeded tolerances are detected. Based on input from the feedback module 160, the operation of the numerical controller 162 may be suspended or a particular predetermined path of the numerical controller 162 may be modified.” column 7, lines 26 to 34.

Alternatively, a “control module 158 may issue, for example, a command to the conveyor controller 104 to stop the conveyor line 102 when a defect has been detected, or a command to discard a particular part” (*see*, column 7, lines 20 to 23).

In other words, if it has been detected that a particular part is defective or exceeds tolerances, the particular part may be discarded and the manufacturing/machining equipment which has been used to manufacture the part will be controlled via the feedback module 160 such that future parts produced by this equipment will not be defective or will not exceed the tolerances.

But *Koren* does not disclose that the measurements performed on a particular part by the inspection apparatus are used to control the manufacturing of this particular part. Once the part has been manufactured, it may only be discarded or passed for further use, but there is no impact on any equipment that machines the part it has been inspected by the apparatus.

This is in contrast to the claimed invention in which the measured spatial data of the object is used to automatically adapt the orientation of the emitter.

In short, *Koren* discloses to use the results of the inspection to control the machining of parts to follow, while the claimed invention teaches to use such data to machine the same part.

Applicant submits that, at most, a skilled person, when combining the references *Smith* and *Feroce* with *Koren*, to add the inspection apparatus at the end of an apparatus that would be obtained by combining *Smith* and *Feroce*. Then the inspection apparatus of *Koren* would inspect whether the hardening process has been perfectly performed or whether there are any defects in the hardened surface. If a defect is detected, the apparatus of *Koren* would then ensure that the spatial orientation of the at least one emitter is changed (slightly) so that subsequent objects will have hardened coatings which do not show the defect. But this would not have resulted in the claimed invention, because *Feroce* still requires a change to the transport direction.

Furthermore, Applicant submits that a *prima facie* case of non-obviousness has not been made. Specifically, Applicant submits that a proper motivation to modify the device of *Smith*, in view of *Feroce* and *Eich*, with *Koren* has not been made. Specifically, the motivation presented in the Office Action is that one would be “motivated by a need to easily reconfigure the measuring system...” Applicant understands this to mean that the motivation to modify the device of *Smith* would be that one of ordinary skill in the art would want to modify the device of *Smith*. Applicant believes that this is not a proper motivation. Rather, a proper motivation would provide why, one of ordinary skill in the art would want to modify the device of *Smith*—as opposed to merely wanting to modify the device of *Smith*. Accordingly, Applicant submits

that a proper motivation to combine the references has not been presented, and, therefore, a *prima facie* obviousness case has not been established.

In view of the above, Applicant submits that claim 1 is patentable over the cited prior art.

Additionally, since claim 1 is patentable, Applicant submits that the remaining dependent claims are patentable as well since they depend from a patentable independent claim.

CONCLUSION

In view of the above, it is submitted that the present application is in condition for issuance and a notice of allowance is respectfully solicited.

If any additional fees are required with this correspondence, the Commissioner is authorized to debit our Deposit Account 50-0545.

Should anything further be required, a telephone call to the undersigned at (312) 226-1818 is respectfully solicited.

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Respectfully Submitted,

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